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No. 52-A-1022-A

25X1

MANUFACTURING SPECIFICATION No. 52-A-1022-A

FOR

WATERPROOF MINIATURE RADIO RECEIVER RR-2

NOTICE

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, USC, Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

15 May 1952

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1. This specification shall consist in part of the following paragraphs of Specification No. 50-A-1003-A, dated 1 June 1950, modified as shown below.

1.1. Paragraphs.--

A.	C-3	D-3c	G-2
B.	C-5	D-3d	G-3
B-1	C-6	E.	G-4
B-1a	C-7	E-1	G-5
B-1b	C-8	E-2	H.
B-1c	C-9	E-3	H-1
B-1d	C-12	F.	H-2
B-1e	C-13	F-2	H-3
B-2	C-14	F-3 (Modified)	H-4
B-3	D.	F-4	H-4a
B-4	D-1	F-5	H-4b
B-5	D-2	F-6 (Modified)	H-4c
C.	D-3	F-7 (Modified)	
C-1	D-3a	G.	
C-2	D-3b	G-1	

- 1.2. Paragraph F-3 shall be modified to read as follows:

"Image Rejection Ratio - The image response of this RR-2 receiver shall not be greater than  $1/32$  of the signal which produces a standard output of 2.5 milliwatts across a 4000-ohm resistive load when the signal generator is tuned to the frequency of the receiver. The standard method of test shall be as follows: The signal generator and the receiver shall be adjusted and connected with the appropriate artificial antenna as described in the section on sensitivity. First, the signal generator shall be tuned to the receiver at 24 megacycles and the input recorded that produces a standard output of 2.5 milliwatts. Then the signal generator shall be tuned higher than the signal frequency by the amount of the intermediate frequency and the attenuator shall be again adjusted to give the same standard output of 2.5 milliwatts. The ratio of the two required signal intensities shall be defined as the image rejection ratio."

- 1.3. Paragraph F-4 shall be modified to read as follows:

"Frequency Stability - The final frequency, after three hours of operation, shall not deviate by more than 0.02 per cent from the frequency obtained after a 15 minute warm-up period. Tests shall be conducted at a standard room temperature of 20 degrees Centigrade, and the frequency shall be measured by means of any precision frequency meter. The frequency drift shall be measured at both high and low ends of all three bands. This

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frequency drift figure shall be measured in such a manner that it includes the drift of both the H. F. O. and the B. F. O. The line voltage may be stabilized during the performance of this test."

- 1.4. Paragraph F-6 shall be modified to read as follows:

"Spurious Response Rejection Ratio - Under standard test conditions of 2.5 milliwatts audio output into 4000-ohm resistive load when the receiver is connected to a signal generator that supplies a 30 per cent modulated 400-cycle signal, the rejection ratio of all spurious responses except the I. F. rejection ratio shall exceed 80 db. throughout the frequency range of this receiver."

5. Paragraph F-7 shall be modified to read as follows:

"Cross-Signal Distortion Products - Under standard test conditions of 2.5 milliwatts audio output into a 4000-ohm resistive load from an unmodulated signal generator, the maximum amplitude of the equivalent cross-signal distortion products shall not exceed 90 db. down from the input signal. Test procedure is to apply two RF signals through artificial antennas of 540 ohms, 1 watt, carbon resistors that are connected in parallel with the antenna receiver input. The amplitude of the signals applied shall be 200,000 microvolts as measured from the signal generator, and the frequency of the two applied signals shall be in the range of 75 kc. to 30 megacycles. The cross-signal distortion products are defined as the sum and differences of the two above frequencies. The receiver is successively tuned to the cross-signal distortion product frequencies and their equivalent amplitude in microvolts is measured. The ratio of the equivalent amplitude to the input amplitude shall not exceed 90 db."

2. The remaining portion of this specification shall consist of the entire contents of Test Specification and Procedure for RR-2 Radio Receiver, dated 11 October 1950, modified as shown below:

- 2.1. Paragraph 4.2.5. shall be modified as follows:

Add the sentence: "This test shall be made with crystal H. F. O. operation."

- 2.2. Paragraph 4.2.6. shall be modified as follows:

Add the sentence: "If the noise output of the receiver exceeds 5 milliwatts, it shall be permissible to reduce the gain-control setting to the point where the noise output is 5 milliwatts or less. However, it shall then be required to perform the tests specified in Paragraph 3.2.4. at this same exact gain-control setting."

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3. The intent of this specification is to provide equipment differing in no essential particular from equipment already in existence. To provide a standard of performance and selection of components, three receivers of recent production shall be chosen by the Government from their stock and set aside as prototypes for this contract.

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File 16-848  
T.D.S

1. Sand blast outside surfaces only. Blast in one direction to give an even granular appearance to all parts. Do not use steel grit.

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a. Dip cases and covers in a Chromate Pickle:

Sodium Dichromate	1.5 lbs.	} See Note.
Nitric Acid	1.5 pts.	
Water	1 gal.	

b. Rinse in cold water.

c. Rinse in hot water.

d. Allow to dry thoroughly.

4. Apply 1 coat of Zinc Chromate Primer all over.  
(Air Drying)

5.

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